App. No 09/651,797 Amdt. Dated December 19, 2003 Reply to Office Action of August 20, 2003,



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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1-5 withdrawn
- 6. (currently amended) An apparatus for the thermal treatment of metallic workpieces or a plurality of stacks formed of metallic workpieces arranged one above the other, said apparatus comprising:

a quenching chamber for receiving preheated workpieces and a quenching gas for cooling same; and

guide channels <u>each</u> for <u>guiding</u> a directed flow of quenching gas about <u>a</u> respective one of said workpieces <u>or said stacks of said workpieces</u>, wherein <u>each of</u> said guide channels <u>have has</u> a closed lateral surface <u>and a length that corresponds at least to a height of the respective individual or stacked ones of said workpieces and <u>surround each of said guide channels surrounds a respective one of said individual</u> workpieces <u>or said stacks of said workpieces</u> along a direction of flow of said quenching gas <u>such that the respective guide channel guides said quenching gas to flow longitudinally past the respective one of said workpieces or said stacks of said workpieces; and</u></u>

a quenching gas closed loop circulation assembly associated with said quenching chamber for circulating said quenching gas along a closed loop circulation path through said quenching chamber.

- 7. (cancelled)
- 8. (currently amended) An apparatus according to claim 7 6, wherein the

length of said guide channels projects beyond a height of said individual or stacked workpieces by an amount equal to half of a diameter or width of said workpieces.

- 9. (original) An apparatus according to claim 6, wherein said guide channels have a cylindrical shape or are adapted to the geometry of said workpieces that are to be cooled.
- 10. (original) An apparatus according to claim 9, wherein said guide channels are cylindrical, having a circular, square or polygonal cross-section.
- 11. (original) An apparatus according to claim 6, wherein said guide channels are interconnected to form a channel system.
- 12. (original) An apparatus according to claim 6, which includes means for displacing said guide channels in said quenching chamber.
- 13. (original) An apparatus according to claim 12, wherein said guide channels are replaceable.
- 14. (original) An apparatus according to claim 6, wherein said quenching chamber is provided with an inlet for said quenching gas, wherein said inlet rests sealingly against said guide channels.
- 15. (original) An apparatus according to claim 6, wherein said guide channels are made of a heat-resistant material.
- 16. (original) An apparatus according to claim 15, wherein said guide channels are made of steel, iron alloys or nickel alloys.
- 17. (previously presented) An apparatus for the thermal treatment of metallic workpieces, said apparatus comprising:
- a quenching chamber for receiving preheated workpieces and a quenching gas for cooling same; and

means for guiding individual substantially laminar flows of quenching gas

around said workpieces in a manner such that each respective individual flow of

quenching gas around a respective one of said workpieces remains out of contact with

the other respective individual flows of quenching gas during its flow around the

respective workpiece, wherein each individual flow of quenching gas is substantially

laminar due to the absence of turbulence-generating mixing which would otherwise

occur if the flows of quenching gas were not prevented from mixing with one another,

said means for guiding individual substantially laminar flows of quenching gas including

a plurality of guide channels each having a closed lateral surface and being disposable

in surrounding relationship around a respective one of said workpieces for directing a

substantially laminar flow of quenching gas around the respective workpiece.

18. (previously presented) An apparatus according to claim 17, wherein said

guide channels have a length that corresponds at least to a height of individual or

stacked ones of said workpieces.

19. (previously presented) An apparatus according to claim 18, wherein the

length of said quide channels projects beyond a height of said individual or stacked

workpieces by an amount equal to half of a diameter or width of said workpieces.

20. (previously presented) An apparatus according to claim 17, which includes

means for displacing said guide channels in said quenching chamber.

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